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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BOYKIN, TERRESSA M

ART UNIT PAPER NUMBER

1711

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,219

Applicant(s)

INAGAKI ET AL.

Examiner

Terressa M. Boykin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

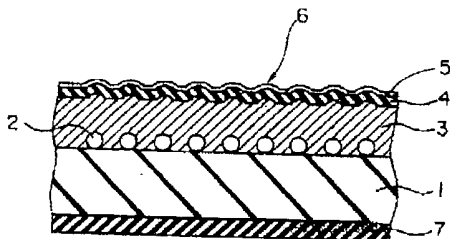
35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-29 rejected under 35 U.S.C. 103(a) as being unpatentable over USPub 20030031884 see abstract, pages 1-4, Figure 1; or US 6767610 see cols. 1-6, Examples and Tables 1, 2 and 3. , US 20040161690 see abstract, pages 1-6, figures 1A and 1B; or US 6251509 see cols. 1-4 each respectively further in view of USP 5859071.

USPub 20030031884 discloses a cleaning tape comprising a nonmagnetic base film, an evaporated metal layer, specifically a magnetic layer or electroconductive layer, formed on the nonmagnetic base film, an inorganic protective film formed on the evaporated metal layer, and surface projections formed on the nonmagnetic base film by particles having a predetermined diameter and density.



According to the figure above, the reference discloses a cleaning tape comprising a nonmagnetic base film, an evaporated metal layer formed on the nonmagnetic base film, and an inorganic protective film formed on the evaporated metal layer.

Preferably, the evaporated metal layer is an alloy magnetic layer mainly composed of cobalt, and the thickness of the alloy magnetic layer is about 30 nm or more. Preferably, the electroconductive layer is a metal layer or alloy layer comprising at least one of aluminum or copper. In that case, the thickness of the electroconductive layer is about 20 nm or more. Alternatively, the electroconductive layer is a metal layer or alloy layer comprising at least one of tungsten, molybdenum, magnesium, iron, and nickel

As a material of the nonmagnetic base film 1, for example, polyethylene terephthalate (PET), poly(ethylene naphthalate) (PEN), polyester, or another polymer material conventionally used as a nonmagnetic base film of a magnetic tape can be mentioned.

As the material of the particles 2, for example, particles of SiO_2 , TiO_2 , Al_2O_3 , CaCO_3 or emulsions, etc. can be used. The emulsions can be aqueous emulsions or nonaqueous emulsions. As a synthetic resin composing the emulsion, for example, a thermoplastic resin composed of a homopolymer or copolymer of vinyl acetate, acrylic ester, methacrylic ester, vinylidene chloride, vinyl chloride, ethylene, styrene, etc., a thermosetting resin such as an epoxy resin, or a synthetic rubber such as a butadiene-styrene copolymer or butadiene-acrylonitrile copolymer

can be mentioned, but the synthetic resin is not particularly limited.

With regard to the amount of alloy employed note examples 1-2.

US 6767610 disclose a magnetic tape having specific surface recording density and comprising a support having specific surface roughness. The reference discloses that recently, a system with a thin film magnetic head assembled has been used practically in a magnetic recording and reproduction system for recording and reproducing computer data. Since the thin film magnetic head can be processed easily for miniaturization or into a multi track head, a multi track fixed head of a thin film magnetic head has been used frequently particularly in a system using a magnetic tape as the recording medium. The reference discloses a magnetic recording medium (magnetic tape) comprising a lower non-magnetic layer with an inorganic non-magnetic powder dispersed in a binder provided on a non-magnetic support, and a thin upper magnetic-layer with a ferromagnetic metal powder dispersed in a binder provided on the non-magnetic layer. As the ferromagnetic powder, for example, it is preferable to use a ferromagnetic alloy powder.

As the binder for the magnetic layer, for example, a thermoplastic resin, a thermosetting resin, a reactive type resin, and a mixture thereof can be presented. Examples of the thermoplastic resins include a vinylidene chloride-acrylonitrile copolymer, a butadiene-acrylonitrile copolymer, a styrene-butadiene copolymer, and a chlorovinyl ether-acrylate copolymer can be presented.

With regard to the polyethylene terephthalate used herein see Tables 1 and 4.

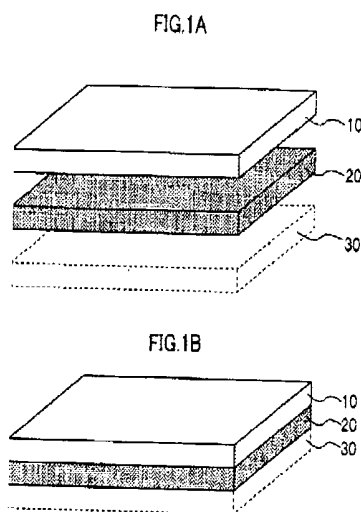
With regard to applicants' claim 8 each component for forming a non-magnetic layer or a magnetic layer was kneaded with a continuous kneader, and dispersed with a sand

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mill.

US 20040161690 discloses an information recording medium and method of producing the same.

FIGS. 1A and 1B are schematic perspective views showing one example of the structure of an information recording medium according to the present invention.



The reference discloses that, as the substrate, plastic films are typically used. Among these plastic films, light transmittable films usable as an OHP film such as a polyacetate film, cellulose triacetate film, nylon film, polyester film, polycarbonate film, polystyrene film, polyphenylene sulfide film, polypropylene film, polyimide film, cellophane and ABS (acrylonitrile-butadiene-styrene) resin film may be preferably used.

Among the aforementioned various plastic films, a polyester film, particularly, those called PETG obtained by replacing about one-half of an ethylene glycol component of PET (polyethylene terephthalate) with a 1,4-cyclohexanemethanol component, those alloyed by mixing polycarbonate with the aforementioned PET and amorphous type polyesters called A-PET which is not biaxially oriented are more preferably used.

In a case where embossing processing is not to be applied, a conventional biaxial

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oriented PET (polyethylene terephthalate) film and the like may be used. However, embossing processing is essential in many cases to retain the functions of conventional cards. At present, therefore, ABS films and polyolefin resin films which are softened at relatively low temperatures, modified PET resin films called PETG and integrally formed films of a modified PET film and a PET film, an amorphous PET resin film or a polycarbonate resin film come to be used.

The reference discloses that a substrate 3 is obtained in the same manner as in Example 1 except that 7 parts of a transparent high-molecular conductive agent, 3 parts of a surfactant, and 90 parts of an alloy resin of PETG and polycarbonate are used as the substrate material.

With regard to applicants' claim 8; **USPub 20040161690** discloses in the preparation: 10 parts of a transparent high-molecular conductive agent is mixed with 90 parts of a PETG resin this mixture is melted and kneaded at 240 C. by using a biaxial extruder with a vent. The kneaded mixture is extruded in a molten film state downward from a die and brought into contact with the outer periphery of a cooling mandrel disposed on the same line as the die to cool it to 80 C., so as to obtain a substrate 1 which is a transparent film having a thickness of 100 .mu.m.

US 6251509 discloses a magnetic tape favorably employable for recording computer data which has a support, and on one side of the support, a essentially non-magnetic layer composed of a non-magnetic powder and a binder, and a magnetic layer composed of a ferromagnetic powder and a binder superposed in order, and on the other side, a back-coating layer containing carbon black,

Recently, in magnetic recording-reproducing systems for computer data, thin-film

magnetic heads have been practically used. Since the thin-film magnetic heads can be easily down-sized and applied to multi-track heads, they are widely used for multi-track linear recording systems, particularly, employing magnetic tapes as computer data recording media. The down-sized thin-film magnetic head is of value for increasing the track density to improve the recording efficiency, and consequently enables the magnetic tape to record the data in an increased density. Further, the multi-tracking system can increase the data transfer rate.

With regard to applicants' claim 2, examples of the ferromagnetic powders include ferromagnetic iron oxide FeO_x ($x=1.33$ to 1.5), FeO_x modified with Co ($x=1.33$ to 1.5), a ferromagnetic alloy (metal) powder mainly comprising Fe, Ni or Co (*in an amount of not less than 75%*), and tabular hexagonal ferrite powder. The ferromagnetic alloy powder is particularly preferred. The binder employed for the magnetic layer is, for example, thermoplastic resin, thermosetting resin, reactive resin, or mixture of them. Examples of the thermoplastic resins include homopolymers or copolymers of vinyl chloride, vinyl acetate, vinyl alcohol, maleic acid, acrylic acid, acrylic ester, vinylidene chloride, acrylonitrile, methacrylic acid, methacrylic ester, styrene, butadiene, ethylene, vinyl butyral, vinyl acetal, and vinyl ether. Concrete examples of the copolymers include vinyl chloride-vinyl acetate copolymer, vinyl chloride-vinylidene chloride copolymer, vinyl chloride-acrylonitrile copolymer, acrylic ester-acrylonitrile copolymer, acrylic ester-vinylidene chloride copolymer, acrylic ester-styrene copolymer, methacrylic ester-acrylonitrile copolymer, methacrylic ester-vinylidene chloride copolymer, methacrylic ester-styrene copolymer, vinylidene chloride-acrylonitrile copolymer, butadiene-acrylonitrile copolymer, styrene-

butadiene copolymer, and chlorovinyl ether-acrylic ester copolymer.

As the material for the support of the reference discloses that the materials used for those of the conventional magnetic tapes are employable. Particularly, non-magnetic materials are preferred. Examples of the materials include polyesters (e.g., polyethylene terephthalate, polyethylene naphthalate, a mixture of polyethylene terephthalate and polyethylene naphthalate, copolymer comprising both ethylene terephthalate component and ethylene naphthalate), polyolefins (e.g., polypropylene), cellulose derivatives (e.g., cellulose diacetate, cellulose triacetate), polycarbonate, polyamides (e.g., aromatic polyamide, aramid), and polyimides (e.g., aromatic polyimide). Preferred is polyethylene terephthalate (PET).

With regard to applicants' claim 8 the reference discloses that all ingredients except the polyisocyanate of each layer were kneaded in a continuous kneader and dispersed in a sand mill.

In view of each of the references above, with regard to claims applicants' claims 3, 4, 11, 15, 17, 18 and 20 the presence of a window is inclusive of a window display commonly present in various recording medium, such as a video cassette, video game etc. and would be an integral part of the article thus anticipating applicants' claims above.

In view of each of the references above, with regard to applicants' claims 7, 9, 12, 21, 23, 26, 27 note that a two-color molding article is an inherent cosmetic feature a

recording medium which may be a cassette player, video game etc. and thus would anticipate applicants' recited two color molded article.

With regard to applicants' claim 29 note that the recording medium such as a video cassette players, video game, etc. and thus would anticipate applicants' recited electronic and electric appliance.

Consequently, with regard to claims 1-29 each of the references discloses a recording medium article prepared from the same components and amounts as claimed by applicants except for fact that the polyethylene terephthalate was retrieved from a recovery method. Nevertheless, it is noted that plastic recycling up to the present time has focused mainly on plastics packaging and primarily on plastic bottles and containers. It is well known in the art that technology for the reclamation of **polyethylene terephthalate** (PET) bottles has been developed due to their high volume in the post consumer waste stream; similar technology also exists for **reclaiming other plastics bottles**, film and molded fabricated parts. PET is currently the major recyclable plastic material, **US 5859071** acknowledges that there has been increasing interest in the recycling of the commingled plastics waste of automobiles. The different engineering plastics used in various parts of an automobile include polycarbonate, nylons, **polyethylene terephthalate**, **acrylonitrile-butadiene-styrene**, etc.

Consequently, in view of the common use of the polyethylene terephthalate and acrylonitrile-butadiene-styrene alloy mixture in recording mediums, as shown by

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the various references above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a scrap or waste product polyethylene terephthalate moiety in the production thereof since such has been the primary focus in industry to employ waste product bottle or polyethylene terephthalate for use in secondary compositions or products.

35 USC 112, Second Paragraph

Claims 1 -29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant's claims are directed to a *shell material* for a recording media. The intended meaning of the word *shell material* is unclear with respect to the composition and location of the recited "shell" to the recorded media, i.e. 1) it is not clear whether applicants' intended meaning for the recited *shell* encompasses that which is the *outer layer portion* of the recorded medium or whether the recited *shell* is inclusive of the *entire recording medium itself*, and 2) it is not clear whether the recited shell material is infact a shell or material that may be formed into a shell, e.g. a piece of wood may be considered a table material but is not in itself a table.

The meaning of every term used in a claim should be apparent from the prior art or from the specification and drawing at the time the application filed in order to achieve a complete exploration of the applicants' invention and its relation to the prior art. In re Zletz, 893 F. 2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989) In the instant case, However, while a term used in the claims may be given a special meaning in the description of the invention, generally no term may be given a meaning repugnant to the usual meaning of

the term. In re Hill, 161 F.2d 367, 73 USPQ 482 (CCPA 1947).

In the instant case, the recited meaning of the word *shell* as used by applicants' with regard to the is not consistent with the acrylonitrile-butadiene styrene resin and polyethylene terephthalate composition which are commonly used to make a recording medium as either the *entire* or primary composition of the recording medium or as a layer thereon and not as a "cover" or "shell" component therein.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (**571-272-1700**).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

A handwritten signature in black ink, appearing to read "Terressa Boykin". The signature is fluid and cursive, with the first name "Terressa" written in a larger, more prominent script than the last name "Boykin".

Examiner Terressa Boykin
Primary Examiner
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